be effective, will have to be man-centered. Preserving a natural wilderness, reducing man-made pollution, providing food, shelter, and clothing, will have to provide direct benefits for man in terms of better health, a richer life, and a more satisfying existence. It is unproductive and naive to assume that the people of the world as a community will commit themselves to saving an endangered species or preserving a natural nook (which man is not allowed to enter) at the expense of man's health and well-being.

What can we do, as citizens of a community, a state, a nation, or the world, to manage our environment?

1. Establish a sound understanding of environmental problems and develop an appreciation for the complexities which exist in the world ecosystem.

2. Become political activists. Environmental decisions are not made in academia, the research laboratory, or EPA. These decisions are made in the room where the town council meets, in the state and national legislatures, and in the world business community.

3. Become social activists. Much of the world's population still does not have adequate food, clothing, and shelter. It is terribly difficult to get excited about air pollution when you are hungry, cold, and sleep in a cardboard box.

4. Encourage and support environmental research, recognizing that many decisions will have to be made without adequate hard data and a complete understanding of the alternatives. Maintain a flexible attitude which will support new alternatives and approaches when they become available.

Alvis G. Turner, MSPH, PhD
Department of Environmental Sciences and Engineering
School of Public Health
University of North Carolina at Chapel Hill

THE MAN IN THE STREET: A TALE OF TWO CITIES*

Q: How can you kill ten thousand Americans a year without public outrage?
A: Run them down with a hundred million cars.

Each year we travel more miles in our cars. Each year we walk less. Yet in the past decade the per capita pedestrian death rate has increased by 20 per cent. The grim facts are hidden by statistics on "deaths per vehicle mile," which have decreased for both pedestrians and vehicle occupants. Statistics on pedestrian deaths per *pedestrian* mile, if they existed, might shock us out of our lethargy.

Lacking these data, perhaps we can profit from consideration of pedestrian deaths in two cities, Baltimore and Rio de Janeiro. Such international comparisons are valid when based on comparable data, and useful when they reveal factors linked to preventable deaths.

Who are the pedestrians who become Baltimore statistics? Graph their age distribution and it's shaped like a V, the bottom at age 30. One-fourth are children less than 10 years old—too young to see the traffic system through adult eyes. One-fourth are 65 or older—harder of hearing, slower to react, and often unable to walk from curb to curb before the light changes. Half the remainder are under the influence of alcohol. This means that three-fourths of all pedestrians killed in Baltimore are very young, elderly, or intoxicated—the kinds of people least likely to perceive adequately and respond appropriately to the signals and hazards of the traffic environment.

In Rio de Janeiro, a summer's research yielded corresponding data for pedestrians killed there in 1970. Who were they? Their age distribution was shaped not like a V but like a pyramid, with the peak at age 40 and relatively few young children and elderly people. Not many were under the influence of alcohol. All together, only one-fourth were either less than 10 years old, 65-plus, or intoxicated. Most were sober, working-age adults.

More than 1000 pedestrians died in Rio in 1970. For sober adults in the 15 to 64 year age group, the per capita death rate was 20 times the Baltimore rate.

There is a message in the startling difference between the two cities in rates and age distributions of pedestrian deaths. Decoded, the message says that in Rio, the pedestrian's task is substantially more difficult than in Baltimore. Deciphering starts with realization that an easy test is failed primarily by those who are weakest or least capable; a test failed by many capable people may be presumed to be harder. Bathtub drownings, for instance, usually involve young children, or people with seizure disorders or under the influence of alcohol. When the able-bodied drown, the task is harder, the hazard greater. Lots of them drowned when the Titanic sank.

Similarly, characteristics of dead pedestrians can reflect the hazard posed by a city's traffic. Large numbers alone are not enough, because of possible differences in the amount of pedestrian travel. But a substantial proportion of apparently able-bodied people among pedestrian fatalities should serve as a flag, calling attention to a difficult task that involves unusual environmental hazards.

Often, death occurs when pedestrians brave the hazards in preference to unacceptable alternatives. If the "safe" way is slow or onerous, some will choose a quicker or easier way, no matter how dangerous.

An extreme example in Rio was a super-highway that split a densely populated community. In places, you could

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cross this highway safely by climbing a long flight of stairs to a pedestrian bridge. But it was an effort to walk half a mile or so to the "passarella," climb the stairs, walk across, and descend the opposite stairway. Carrying children or a bicycle made it almost impossible. Not surprisingly, many pedestrians spurned what the system had to offer and chose a way that was direct, although obviously more dangerous. Even with children and bicycles they would dash across three lanes of traffic, climb over the concrete divider, then cross the remaining lanes. Recently the divider has been topped with a wire fence; unconfirmed reports suggest that this has reduced but not eliminated pedestrian traffic across the highway.

In 1970, that 15-mile stretch of highway lured some 200 pedestrians to their deaths. That's nearly 4 times the number of pedestrians killed each year in the entire city of Baltimore, and it's as if they had all been sacrificed on the Jones Falls Expressway.

Pedestrians in American cities are less likely to be overwhelmed by the difficulty of reaching their destinations. But consider those pedestrians we have failed to protect. And "failed" is not too strong a word. They are dead. They are telling us the system doesn't work. Occasionally, in places where a large proportion of those killed are able-bodied adults, we should look for extraordinary hazards that need correction. Far more commonly, the data say that we have done the *easy* part, that we have built a system in which a pedestrian is safe if he is mature, sober, and mentally and physically agile. Those less perfect may pay with their lives for our failure to do the *hard* part.

In effect, society imposes a death penalty for error on the highway. We try to justify it by blaming someone, saying "he shouldn't have done that." Yet in other areas of our lives, mistakes rarely bring down the penalty of death. A misdialed phone call at 3 a.m. means embarrassment and anger, but the telephone doesn't blow up in the caller's hand. His victim is not electrocuted. On the highway, one dies.

Two ideas deserve consideration, although neither would appeal to a traffic engineer trying to move the maximum volume of motor traffic through a city. First, we should design our transport system around the most vulnerable person. This means the pedestrian as opposed to the motorist. It also means the aged, very young, or drunk pedestrian. Why? In part, because these are the people at greatest risk. More important, if you design the system for them, it will generally be safe for all pedestrians.

Second, to ensure that pedestrians choose the safest way to their destinations, the safe routes must be designed to be the easiest and most appealing. It is incorrect to assume that people won't take chances because something is illegal and hazardous. The dangerous way is guaranteed to invite risk-taking if it seems easier or quicker. Prevention, therefore, requires such strategies as placing traffic lights in the middle of city blocks to enable pedestrians to cross there. Or moving motor traffic to different levels, leaving pedestrians at the level they prefer.

Radical notions? Only if you are wedded to the principle that moving people in cars quickly is more desirable than moving people on foot safely. Or that distance and time have similar implications for pedestrians and motorists. A 200-foot detour or a 2-minute wait in the rain imposes a far greater burden on the pedestrian than on the vehicle and its occupants. It is time to shift the burden away from the pedestrian—who pays with his time, energy, and perhaps even his life—and onto the vehicle.

In any encounter with a moving vehicle, the pedestrian will lose. Is it fair that he must function in a system designed by and for motorists? Many people would say that it is unrealistic to talk about designing a system to fit the weakest link, the poorest member of society, the man with the least political and economic clout. But it can be done. There's a town in Scotland planned so a pedestrian's route never intersects the route of any motor vehicle except a public bus. Other cities are experimenting with a variety of strategies that effectively separate people on foot from those in cars. But until planners everywhere represent the interests of the pedestrian, rather than the interests of those with a much larger economic stake in the system, we can expect little change in the grim statistics on pedestrians.

Susan P. Baker, MPH
Department of Public Health Administration
Johns Hopkins School of Hygiene and Public Health

LETTERS to the editor

WILL HEALTH SERVICES TAKE THE RAP FOR INFLATION?

The economic conference summoned by President Ford last summer dwelt extensively on health charges as an inflationary force. Does this mean that the administration plans to penalize research and child health for our government's past failures to curb extravagance in international affairs? Are health services to be the scapegoat in the fight to check inflation?

One index of the administration's intent is that Budget Director Roy Ash and other high officials complain that the national bill for health has come to exceed the budget for defense. This unholy comparison ignores, of course, differences in the objectives and beneficiaries between health and defense industries. Further, it fails to count the vast military sums which are charged to nondefense budgets: e.g.,